

Broadband over power lines raises an environmental issue of the same magnitude as logging in national forests or drilling for oil and gas in environmentally sensitive areas. The high frequency (for the purposes of this communication 2-30 MHz) radio spectrum is a unique natural resource that is especially important in times of concern for homeland security and natural disaster. The ability of the ionosphere to support long distance communication with minimal equipment is a rare phenomenon, and one that provides a major backup to more technically sophisticated technologies. It is in regular use for military, broadcasting, emergency communications and a host of other applications. Its use requires a low noise floor at the receiver location. Because of the physics of electromagnetic propagation, deployment of broadband over power lines will likely raise the noise floor in a wide area surrounding the power lines. This increased noise will likely be sufficient to render high frequency radio communication useless in many areas. This would be an unacceptable degradation of the electromagnetic environment exactly parallel to air and water pollution of the human environment.